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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	10/713,427
Filing Date	November 17, 2003
First Named Inventor	Jang-Kun SONG
Art Unit	1756
Examiner Name	John A. McPherson
Attorney Docket Number	8071-140T (OPP 031571US)

### ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input checked="" type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	Credit Card Payment Form
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	PTO-2038 for \$400.00
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	F. Chau & Associates, LLC		
Signature			
Printed name	Scott L. Appelbaum		
Date	June 13, 2006	Reg. No.	41,587

### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Scott L. Appelbaum	Date	June 13, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Docket: 8071-140T (OPP031571 US)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Jang-Kun SONG

Examiner: John A. McPherson

Serial No.: 10/713,427

Group Art Unit: 1756

Filed: November 17, 2003

For: **LIQUID CRYSTAL DISPLAY**

Mail Stop: Petitions  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PETITION UNDER 37 C.F.R. § 1.182 REQUESTING WITHDRAWAL OF RECORDED  
TERMINAL DISCLAIMER**

Sir:

Applicants hereby request withdrawal of the terminal disclaimer filed on April 11, 2005 with the United States Patent and Trademark Office in connection with the above-referenced patent application. A recorded terminal disclaimer may be withdrawn by filing a petition under 37 C.F.R. 1.182 requesting the withdrawal of the recorded terminal disclaimer, prior to the application in which it is filed issuing as a patent. (See MPEP 1490, Section VII.)

The above-mentioned terminal disclaimer was filed to overcome a provisional obviousness-type double patent rejection of claims 33-35, 47 and 48 over claims 12-25 of co-pending U.S. Patent Application Serial No. 09/928,349 (published as US2002/0033927). However, it is noted that claims 12-25 of co-pending U.S. Patent Application Serial No. 09/928,349 are no longer pending in that application but rather have been canceled. A copy of

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**CERTIFICATE OF MAILING 37 C.F.R. §1.8(a)**

I hereby certify that this correspondence (and any document referred to as being attached or enclosed) is being deposited with the United States Postal Service as first class mail, postage paid in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, on June 13, 2006.

Dated: 6/13/06

  
Scott L. Appelbaum

the amendment filed in connection with U.S. Patent Application Serial No. 09/928,349 canceling claims 12-25 is enclosed herewith. As claims 12-25 of co-pending U.S. Patent Application Serial No. 09/928,349 have been canceled, the obviousness double patenting issue for which the terminal disclaimer on April 11, 2005 was filed no longer exists, and thus the withdrawal of this April 11<sup>th</sup> terminal disclaimer is respectfully requested.

Also, accompanying this petition is a credit card payment form PTO-2038 for \$400.00 covering the required petition fee set forth in § 1.17(f).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Scott L. Appelbaum', written over a horizontal line.

Scott L. Appelbaum  
Reg. No. 41,587  
Attorney for Applicants

F. Chau & Associates, LLC  
130 Woodbury Road  
Woodbury, NY 11797  
Tel: (516) 692-8888  
Fax: (516) 692-8889

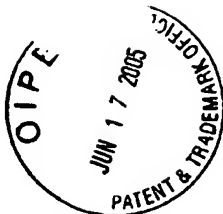
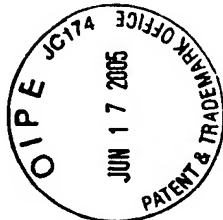


Inventors:	Joong-Hyun MUN, <i>et al.</i>	Date:	June 17, 2005
Serial No.:	09/928,349	Group Art.:	2871
Filing Date:	August 14, 2001	Examiner:	NGO, Huyen Le
Confirmation No.:	6679	Atty. Docket:	6192.0263.AA
For:	LIQUID CRYSTAL DISPLAY HAVING PROTRUSIONS WITH DIFFERENT THICKNESSES		

Commissioner for Patents

Please place the Patent Office receipt stamp hereon to acknowledge receipt of the following:

1. A Reply and Amendment Under 37 C.F.R. § 1.116;
  2. A Terminal Disclaimer;
  3. A check no. 224006 in the amount of \$130.00 to cover the Terminal Disclaimer fee, and
  4. one (1) acknowledgement postcard
- Hae-Chan Park/alj  
Registration No. 50,114



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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

*In re* Patent Application of:

Joong-Hyun MUN, *et. al.*

Serial No.: 09/928,349

Confirmation No.: 6679

Filed: August 14, 2001

Docket No.: 6192.0263AA

Group Art Unit: 2871

Examiner: NGO, Huyen Le

For: **LIQUID CRYSTAL DISPLAY HAVING PROTRUSIONS WITH DIFFERENT THICKNESSES**

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY AND AMENDMENT UNDER 37 C.F.R. § 1.116**

Sir:

In response to the Final Office Action mailed March 18, 2005 (Paper No. 20050311) ("Office Action"), Applicants respectfully request reconsideration of the application in view of the following Amendments and Remarks.

Applicants believe that no extensions of time are required at this time. If extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned for under 37 C.F.R. §1.136(a). Applicants believe that no further fees for net addition of claims are required at this time. Any fees required for further extensions of time and any fees for the net addition of claims are hereby authorized to be charged to our Deposit Account No. 23-1951.

**AMENDMENTS TO THE CLAIMS**

Please **CANCEL** claims 8 and 12-38 as shown below.

The following is a complete list of all claims in this application.

1-8. (Cancelled)

9. (Previously Presented) A liquid crystal display (LCD), comprising:

a first substrate;

a black matrix formed on the first substrate;

a color filter formed on the first substrate;

a common electrode formed on the color filter;

a first protrusion formed on the common electrode and having a first thickness;

and

a second protrusion formed on the common electrode and having a second thickness, the second thickness being greater than the first thickness.

10. (Previously Presented) The LCD of claim 9, wherein the first and the second protrusions are formed of at least one of a photosensitive organic insulating layer, a photoresist film and a silicon-based insulating layer.

11. (Previously Presented) The LCD of claim 9, wherein the common electrode is formed of indium tin oxide or indium zinc oxide.

12-38. (Withdrawn)

39. (Original) A liquid crystal display, comprising:

a first insulating substrate;

a black matrix formed on the first insulating substrate;

a color filter formed on the first insulating substrate;

a common electrode formed on the color filter;

a first protrusion and a second protrusion formed on the common electrode, wherein the first protrusion has a first height and the second protrusion has a second height different than the first height;

a second insulating substrate;

a thin film transistor (TFT) formed on the second insulating substrate, wherein the first protrusion comprises a first end formed on the common electrode and a second end formed on the TFT;

a pixel electrode formed on a portion of the TFT; and

liquid crystal material formed between the first insulating substrate and the second insulating substrate.

40. (Original) The liquid crystal display of claim 39, wherein the second end of the first protrusion is formed on a portion of the pixel electrode.

41. (Original) The liquid crystal display of claim 39, further comprising a third protrusion having a first end and a second end, wherein the first end is arranged on the common electrode.

42. (Original) The liquid crystal display of claim 41, further comprising a fourth protrusion having a first end and a second end, wherein the first end is arranged on the common electrode.

43. (Original) The liquid crystal display of claim 42, wherein the second end of the third protrusion is arranged on a second thin film resistor (TFT) formed on the second insulating substrate.

44. (Original) The liquid crystal display of claim 43, wherein the second end of the third protrusion is arranged on portion of a pixel electrode arranged on the second TFT.

45. (Original) The liquid crystal display of claim 42, wherein the second end of the fourth protrusion is in contact with the liquid crystal material.

46. (Original) The liquid crystal display of claim 42, wherein the pixel electrode is selected from a group of material consisting of includes indium tin oxide (ITO) and indium zinc oxide (IZO).

47. (Previously Presented) The LCD of claim 9, further comprising a second substrate facing the first substrate.

48. (Previously Presented) The LCD of claim 47, wherein the second substrate comprises:

a thin film transistor (TFT); and

a pixel electrode electrically connected to the TFT.

49. (Previously Presented) The LCD of claim 9, further comprising a third protrusion and a forth protrusion formed on the common electrode.

50. (Previously Presented) The LCD of claim 48, wherein the first protrusion has a first end arranged on the common electrode and a second end arranged on the TFT.

**REMARKS**

By this amendment, claims 8 and 12-38 have been cancelled. Claims 1-7 have been previously cancelled. The Office Action indicates that previously withdrawn claims 39-46 are rejoined for further consideration. Accordingly, claims 9-11 and 39-50 are currently pending in the application, of which claims 9 and 39 are independent.

Applicants respectfully submit that the above amendments do not add new matter to the application and are fully supported by the specification.

In view of the above Amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

***Double Patenting***

Claims 9-11 and 39-50 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17-21 of U. S. Patent No. 6,678,031 issued to Song ("Song") in view of U. S. Patent No. 6,567,144 issued to Kim, et al. ("Kim") and further in view of U. S. Patent No. 6,067,144 issued to Murouchi ("Murouchi"). This rejection is respectfully traversed.

To obviate the provisional double patenting rejection, in this response, Applicants timely submit a Terminal Disclaimer attached hereafter. Accordingly, withdrawal of the rejection is respectfully requested.


**CONCLUSION**

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

  
Hae-Chan Park  
Reg. No. 50,114

Date: June 17, 2005

**McGuireWoods LLP**  
1750 Tysons Boulevard  
Suite 1800  
McLean, VA 22102-4215  
Tel: 703-712-5365  
Fax: 703-712-5280  
HCP:WSC/tmk

**ATTACHMENT:    TERMINAL DISCLAIMER**

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

*In re* Patent Application of:

Joong-Hyun MUN, *et. al.*

Serial No.: 09/928,349

Confirmation No.: 6679

Filed: August 14, 201

Docket No.: 6192.0263AA

Group Art Unit: 2871

Examiner: NGO, Huyen Le

**For: LIQUID CRYSTAL DISPLAY HAVING PROTRUSIONS WITH DIFFERENT THICKNESSES**

Mail Stop AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**TERMINAL DISCLAIMER**

Sir:

The owner, Samsung Electronics Co., Ltd. of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration dates of the full statutory terms defined in 35 U. S.C. 154 to 156 and 173, as presently shortened by any terminal disclaimer, of co-pending U. S. Patent Application No. 6,678,031.

The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patents are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration dates of the full statutory terms as defined in 35 U.S.C. 154 to 156 and 173 of the prior patents, as presently shortened by any terminal disclaimer, in the event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a

court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. §1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

For submissions on behalf of an organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is an attorney of record empowered to act on behalf of the organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

A check for the fee required under 37 C.F.R. §1.20(d) is submitted herewith.  
Please charge any deficiency and credit any overpayment to Attorney's Deposit Account 23-1951.

Respectfully submitted,



Hae-Chan Park  
Reg. No. 50,114

Date: June 17, 2005

**McGuire Woods LLP**  
1750 Tysons Boulevard  
Suite 1800  
McLean, VA 22102-4215  
Tel: 703-712-5000  
Fax: 703-712-5050

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